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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/723,653 | 11/26/2003 | Edmund A. Flexman | AD6924 US NA | 8786 |
| 23906 | 7590 | 10/06/2005 | EXAMINER | |
| E I DU PONT DE NEMOURS AND COMPANY LEGAL PATENT RECORDS CENTER BARLEY MILL PLAZA 25/1128 4417 LANCASTER PIKE WILMINGTON, DE 19805 | | | KRUER, KEVIN R | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1773 | |
| DATE MAILED: 10/06/2005 | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/723,653

Applicant(s)

FLEXMAN ET AL.

Examiner

Kevin R. Kruer

Art Unit

1773

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
4a) Of the above claim(s) 15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>3/22/2004; 7/16/04</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-14, drawn to an article, classified in class 428, subclass 411.1+.
 - II. Claim 15, drawn to a method of making said article, classified in class 264, subclass various subclasses.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the product could be made by a materially different process. For example, the product could be made by applying a non-acetal thermoplastic polymer to the surface of the polyoxymethylene polymer substrate.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

3. During a telephone conversation with Tamera Fair on Monday September 26, 2005 a provisional election was made with traverse to prosecute the invention of Group I, claims -14. Affirmation of this election must be made by applicant in replying to this Office action. Claim 15 is withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

4. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Information Disclosure Statement

5. The information disclosure statements filed 3/22/2004 and 7/16/2004 have been fully considered. Initialed copies of said PTO-1449s are enclosed herein.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-5, 8, and 9 are rejected under 35 USC 102(b) as being anticipated by Kosinski (US 5,237,008).

Kosinski teaches incorporating 0.2-3.0wt% of linear low-density polyethylene into polyoxymethylene composition (abstract). The polyoxymethylene may be branched or linear and will have a number average molecular weight of 10,000-1000,000 (col 3, lines 45+). Said composition may be laminated to other layers (col 6, lines 1+).

8. Claims 1, 5, 8, 9, and 11 are rejected under 35 USC 102(b) as being anticipated by JP2002192663A (herein referred to as Polyplastics).

Polyplastics teaches an intermediate layer with a layer of polyolefin and a layer of polyoxymethylene on either side of it. The layers have a specified volume of polyolefin and polyoxymethylene such that the ratio of polyolefins in the layers satisfies a predetermined relationship. The intermediate layer comprises 20-80vol% polyolefin, and 20-80vol% polyoxymethylene. Furthermore, the polyolefin layer comprises 100-50vol% polyolefin and the polyoxymethylene layer comprises 100-45vol% polyoxymethylene.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 13 is rejected under 35 USC 103(a) as being unpatentable over Kosinski (US 5,237,008), as applied to claims 1-5, 8, and 9 above, and further in view of Shofner et al (US 3,813,212).

Kosinski is relied upon as above, but does not teach that the polyoxymethylene layer should be flame treated prior to lamination. However, Shofner teaches it is well known in the art to flame treat a thermoplastic polymer prior to lamination in order to improve adhesion (col 1, lines 8+). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to surface treat the polyoxymethylene layer taught in Kosinski. The motivation for doing so would have been to improve the interlayer adhesion of the laminate.

Art Unit: 1773

11. Claims 1, 5, 6, 7, and 9 are rejected under 35 USC 103(a) as being unpatentable over JP 2002309064A (herein referred to as Nakamura) in view of Kosinski (US 5,237,008).

Nakamura teaches a composition comprising 100pbw polyoxymethylene and 0-100pbw of a polycarbonate resin (abstract). Said composition has excellent impact resistance, dimensional stability, and mechanical properties (abstract).

Nakamura does not teach said layer may be laminated to other layers. However, Kosinski teaches it is known in the art to laminate polyoxymethylene layers to other layers. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to laminate the resin composition taught in Nakamura to another layer. The motivation for doing so would have been that Kosinski teaches it is known to laminate polyoxymethylene layers to other layers for use in desired arts.

12. Claims 1, 5, 6, 7, and 9-12 are rejected under 35 USC 103(a) as being unpatentable over JP02027615A (herein referred to as Nakagawa) in view of JP 2002309064A (herein referred to as Nakamura) .

Nakagawa teaches a laminate comprising 2 insulating layers. The first comprises a signal wire, a first grounding conductor, a second grounding conductor, and polyoxymethylene. The second comprises polyoxymethylene. The conductor is formed by lamination with an epoxy glue. Herein the conductor is understood to read on the discontinuous layer of claim 10, and the epoxy adhesive is herein understood to read on the epoxy of claims 12 and 13. The 2 insulating layers are understood to be continuous with one another.

Nakagawa does not teach the polyoxymethylene layer should comprise the claimed composition. However, Nakamura teaches a composition comprising 100pbw polyoxymethylene and 0-100pbw of a polycarbonate resin (abstract). Said composition has excellent impact resistance, dimensional stability, and mechanical properties (abstract). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the resin taught in Nakamura in place of the polyoxymethylene taught in Nakagawa. The motivation for doing so would have been to improve the impact resistance, dimensional stability, and mechanical properties of said laminate.

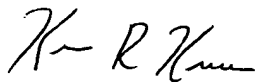
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin R. Kruer whose telephone number is 571-272-1510. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1773

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "K R Kruer".

Kevin R. Kruer
Patent Examiner-Art Unit 1773